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BELL, BOYD & LLOYD, LLC			TON, ANTHONY T	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,011

Applicant(s)

GUSTKE, ANDREAS

Examiner

Anthony T Ton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/21/02 & 1/31/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 25, 26 and 28-31** are objected to because of the following informalities:

a) **In Claims 25 and 28-31:** the limitation “the radio network terminating **units**” in line 8 of claim 25, and in line 2 of claims 28-31 is inconsistent with the limitation “the radio network terminating **facilities**”, which recited in lines 2, 5, 7 and 10 of claim 1, and in lines 4 and 5 of claim 25.

Examiner suggests changing this limitation to “the radio network terminating **facilities**” to be unique with each other.

b) **In Claim 26:** the abbreviations “**an MC-CDMA**” and “**a COFDM**” in line 2 are improper because they are not popular in the art; therefore, they should be completely spelled out at least once in the claimed limitations of the claims.

Examiner suggests changing these abbreviations to “**a multi-carrier CDMA**” and “**a circuit-oriented FDM**”, respectively.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. **Claims 16, 17, 21, 25 and 28** are rejected under 35 U.S.C. 102(b) as being anticipated by **Pequet** (EP No. 0,689,303 A1) (provided by the Applicants in IDS dated 1/31/2001).

a) **In Regarding to Claim 16: Pequet disclosed** a communication system, comprising:
at least one radio base station to which radio network terminating facilities for connecting communication terminals can be connected (*see Fig.1: BS*);

first communication relations provided between the radio base station and the radio network terminating facilities within a first communication network (*see Fig.1: BS, M1 and M2; and see col.4 lines 26-32: FUL and FDL (first communication relations)*); and

additional transmission and switching means in the radio network terminating facilities for implementing at least one further communication network (*see Fig.1: M3 and M4*),

wherein the additional transmission and switching means provide for implementing additional wireless communication relations between the radio network terminating facilities (*see col.4 lines 39-41: FDM (additional wireless communication)*).

b) **In Regarding to Claim 17: Pequet further disclosed** the communication system further comprising at least one further radio network terminating facility (*see Fig.1: M3*), wherein the additional wireless communication relations are switched via the at least one further radio network terminating facility (*see Fig.1: wherein M1 communicates with M4 via the M3*).

c) **In Regarding to Claim 21: Pequet further disclosed** at least one of a connection-oriented wireless communication network and a connectionless wireless communication network is formed with the aid of the additional wireless communication relations (*see col.5 line 10 – col.7 line 1: wherein at least one connection-oriented wireless communication network with*

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carrier frequencies FDL (downlink) and FUL (uplink) is formed by the aid of the additional wireless communication relations (frequency FDM)).

d) In Regarding to Claim 25: Pequet further disclosed further means for implementing the communication relations in the radio base station and in the radio network terminating facilities, wherein data streams to be transmitted from the radio base station to the radio network terminating facilities are transmitted in accordance with at least one of a TDM-oriented, FDM-oriented and CDM-oriented multiple transmission method (*see Fig.2: FDL*), and wherein data streams to be transmitted from the radio network terminating units to the radio base station are transmitted according to at least one of a TDMA, CDMA and FDMA access transmission method (*see Fig.2: FUL*).

e) In Regarding to Claim 28: Pequet further disclosed at least one of the radio network terminating units additionally represents a repeater network terminating unit (*see Fig.1: M1 or M3*).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 18, 19, 22 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pequet** (EP No. 0,689,303 A1) in view of **Haartsen** (US Patent No. 6,028,853).

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a) **In Regarding to Claim 18: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose the at least one further communication network is provided for implementing additional wireless communication relations in a home domain.

Haartsen disclosed such at least one further communication network is provided for implementing additional wireless communication relations in a home domain (*see Fig.1 and col.5 lines 19-39: wherein PDA communicates with another portable phone 1 via link L2 (additional wireless communication relations) and HBS 2 (home domain)*)).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such at least one further communication network is provided for implementing additional wireless communication relations in a home domain, as taught by Haartsen with Pequet, so that a packet received by a mobile station can be forwarded to a personal computer located in local area network. **The motivation** for doing so would have been to provide a communication from a home user to a remote user via radio communication terminal controlled by a second communication network. Therefore, it would have been obvious to combine Haartsen with Pequet in the invention as specified in the claim.

b) **In Regarding to Claim 19: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose the first communication network is a public communication network and the at least one further communication network is a private communication network.

Haartsen disclosed such a first communication network is a public communication network and the at least one further communication network is a private communication network *(see Fig.1: PSTN and col.1 lines 57-67: Wireless systems in which no central synchronization or control exists are typically applied in private, short-range communications).*

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such a first communication network is a public communication network and the at least one further communication network is a private communication network, as taught by Haartsen with Pequet, so that the plain old telephone service (POTS) can be used with wireless communication devices. **The motivation** for doing so would have been to provide an independent communication network without the supervision of a master control unit. Therefore, it would have been obvious to combine Haartsen with Pequet in the invention as specified in the claim.

c) **In Regarding to Claim 22: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose a self-configuring wireless communication network having a neural network structure is formed with the aid of the additional wireless communication relations.

Haartsen disclosed such a self-configuring wireless communication network having a neural network structure is formed with the aid of the additional wireless communication relations *(see Fig.1: LAN 6 and links L3-L5 and col.5 lines 33-39).*

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such a self-configuring wireless communication network having a neural network

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structure is formed with the aid of the additional wireless communication relations, as taught by Haartsen with Pequet in a purpose of supplying a backbone to a radio communications network.

The motivation for doing so would have been to provide communications to radio communication devices effectively. Therefore, it would have been obvious to combine Haartsen with Pequet in the invention as specified in the claim.

d) **In Regarding to Claim 27: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose at least one of the radio network terminating facilities includes at least one further connection to an additional communication network.

Haartsen disclosed such at least one of the radio network terminating facilities includes at least one further connection to an additional communication network (*see Fig.1: wherein the Printer 5 connected to LAN 6 via Link 4 and PC 4*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such at least one of the radio network terminating facilities includes at least one further connection to an additional communication network, as taught by Haartsen with Pequet, so that a wireless device can be controlled by a communication network via another wireless communication device and a radio link. **The motivation** for doing so would have been to provide an enhanced wireless communication system to reduce a cost in installation of complicated controllers in a communication network. Therefore, it would have been obvious to combine Haartsen with Pequet in the invention as specified in the claim.

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6. **Claims 20, 23, 26, 29 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pequet** (EP No. 0,689,303 A1) in view of **Threadgill et al.** (US Patent No. 6,185,409) hereinafter refers to as **Threadgill**.

a) **In Regarding to Claim 20: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose the additional transmission and switching means includes switching and transmission routines, implemented as programs, for implementing the additional wireless communication relations.

Threadgill disclosed such programs (*see col.6 lines 9-13: software*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such programs, as taught by Threadgill with Pequet, so that facility devices of a communication system can be automate controlled. **The motivation** for doing so would have been to provide a faster and reliable process in a communication network. Therefore, it would have been obvious to combine Threadgill with Pequet in the invention as specified in the claim.

b) **In Regarding to Claim 23: Pequet disclosed** all aspects of this claim as set forth in claims 16 and 21.

Pequet failed to explicitly disclose information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network.

Threadgill disclosed such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication

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network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network (*see Figs.39 and 43: IP*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network, as taught by Threadgill with Pequet, so that mobile stations can be communicated with an Internet user effectively. **The motivation** for doing so would have been to provide an Internet service to a wireless communication device. Therefore, it would have been obvious to combine Threadgill with Pequet in the invention as specified in the claim.

c) **In Regarding to Claim 26: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose the additional wireless communication relations are implemented with the aid of one of a multi-carrier CDMA multiple access method, a circuit-oriented-FDM modulation, and a multiple access method conforming to CDMA.

Threadgill disclosed such a multiple access method conforming to CDMA (*see col.17 lines 41-65: CDMA*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such a multiple access method conforming to CDMA, as taught by Threadgill with Pequet, so that a communication between wireless devices can be operated in a CDMA network. **The motivation** for doing so would have been to provide an enhanced wireless communication

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system in a communication network. Therefore, it would have been obvious to combine Threadgill with Pequet in the invention as specified in the claim.

d) In Regarding to Claims 29 and 30: Pequet disclosed all aspects of these claims as set forth in claim 16.

Pequet failed to explicitly disclose at least one of the radio network terminating facilities includes further means for encrypting information to be transmitted with the aid of the additional wireless communication relations; and wherein at least one of the radio network terminating units includes further means for compressing information to be transmitted with the aid of the additional wireless communication relations.

Threadgill disclosed such encrypting information and compressing information (*see col.14 lines 51-53 and col.56 lines 29-31: encrypting and compressing*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such encrypting information and compressing information, as taught by Threadgill with Pequet, so that data information can be protected as well as communications bandwidth can be increased effectively. **The motivation** for doing so would have been to provide an enhanced wireless communication system in a communication network. Therefore, it would have been obvious to combine Threadgill with Pequet in the invention as specified in the claims.

7. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Pequet** (EP No. 0,689,303 A1) in view of **Haartsen** (US Patent No. 6,028,853) as applied to claims 16 and 22 above, and further in view of **Threadgill et al.** (US Patent No. 6,185,409).

Pequet disclosed all aspects of this claim as set forth in claims 16 and 22.

Pequet failed to explicitly disclose information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network.

Threadgill disclosed such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network (*see Figs.39 and 43: IP*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network, as taught by Threadgill with Pequet, so that mobile stations can be communicated with an Internet user effectively. **The motivation** for doing so would have been to provide an Internet service to a wireless communication device. Therefore, it would have been obvious to combine Threadgill with Pequet in the invention as specified in the claim.

8. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Pequet** (EP No. 0,689,303 A1) in view of **Haartsen** (US Patent No. 6,028,853) as applied to claims 16 and 22 above, and further in view of **Sicher et al.** (US Patent No. 6,385,195) hereinafter refers to as **Sicher**.

Pequet disclosed all aspects of this claim as set forth in claims 16 and 22.

Pequet failed to explicitly disclose information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network.

Sicher disclosed such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network (*see Figs.3 and 4: E-IWF, Real-time Router, Voice over IP*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network, as taught by Sicher with Pequet, so that mobile stations can be communicated with an Internet user effectively. **The motivation** for doing so would have been to provide an Internet service to a wireless communication device. Therefore, it would have been obvious to combine Sicher with Pequet in the invention as specified in the claim.

9. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Pequet** (EP No. 0,689,303 A1) in view of **Mauney et al.** (US Patent No. 6,484,027) hereinafter refers to as **Mauney**.

Pequet disclosed all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose at least one of the radio network terminating facilities includes at least one further connection to an additional communication network.

Mauney disclosed such at least one of the radio network terminating facilities includes at least one further connection to an additional communication network (*see Figs.3 and 2: wherein the wireless handsets 42A and 42B directly communicate to each other as shown in Fig.3, and the handset 42B is connected to an additional communication network (130, 116 and 124) as shown in Fig.2).*

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such at least one of the radio network terminating facilities includes at least one further connection to an additional communication network, as taught by Mauney with Pequet, so that a wireless handset can be capable of operating in a direct handset-to-handset communication mode. **The motivation** for doing so would have been to provide an enhanced wireless communication system to reduce a cost in installation of complicated controllers in a communication network. Therefore, it would have been obvious to combine Mauney with Pequet in the invention as specified in the claim.

10. **Claims 20, 23, 26 and 29-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pequet** (EP No. 0,689,303 A1) in view of **Sicher et al.** (US Patent No. 6,385,195).

a) **In Regarding to Claim 20: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose the additional transmission and switching means includes switching and transmission routines, implemented as programs, for implementing the additional wireless communication relations.

Sicher disclosed such programs (*see col.1 lines 26-30: software applications).*

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such programs, as taught by Sicher with Pequet, so that facility devices of a communication system can be automate controlled. **The motivation** for doing so would have been to provide a faster and reliable process in a communication network. Therefore, it would have been obvious to combine Sicher with Pequet in the invention as specified in the claim.

b) **In Regarding to Claim 23: Pequet disclosed** all aspects of this claim as set forth in claims 16 and 21.

Pequet failed to explicitly disclose information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network.

Sicher disclosed such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network (*see Figs.3 and 4: E-IWF, Real-time Router, Voice over IP*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such information to be transmitted is inserted into packet-oriented data streams and the packet-oriented data streams are switched via the wireless communication network, and wherein services based on Internet protocol are implemented with the aid of the wireless communication network, as taught by Sicher with Pequet, so that mobile stations can be communicated with an Internet user effectively. **The motivation** for doing so would have been to provide an Internet

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service to a wireless communication device. Therefore, it would have been obvious to combine Sicher with Pequet in the invention as specified in the claim.

c) In Regarding to Claim 26: Pequet disclosed all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose the additional wireless communication relations are implemented with the aid of one of a multi-carrier CDMA multiple access method, a circuit-oriented-FDM modulation, and a multiple access method conforming to CDMA.

Sicher disclosed such a multiple access method conforming to CDMA (*see col.4 lines 33-46: CDMA*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such a multiple access method conforming to CDMA, as taught by Sicher with Pequet, so that a communication between wireless devices can be operated in a CDMA network. **The motivation** for doing so would have been to provide an enhanced wireless communication system in a communication network. Therefore, it would have been obvious to combine Sicher with Pequet in the invention as specified in the claim.

d) In Regarding to Claims 29 and 30: Pequet disclosed all aspects of these claims as set forth in claim 16.

Pequet failed to explicitly disclose at least one of the radio network terminating facilities includes further means for encrypting information to be transmitted with the aid of the additional wireless communication relations; and wherein at least one of the radio network terminating units includes further means for compressing information to be transmitted with the aid of the additional wireless communication relations.

Sicher **disclosed** such encrypting information and compressing information (*see col. 1 lines 52-54 and col. 9 lines 31-33: encrypting and compressing*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such encrypting information and compressing information, as taught by Sicher with Pequet, so that data information can be protected as well as communications bandwidth can be increased effectively. **The motivation** for doing so would have been to provide an enhanced wireless communication system in a communication network. Therefore, it would have been obvious to combine Sicher with Pequet in the invention as specified in the claims.

e) **In Regarding to Claim 31: Pequet disclosed** all aspects of this claim as set forth in claim 16.

Pequet failed to explicitly disclose at least one the radio network terminating facilities includes means for implementing a wireless packet-oriented communication system according to ITU Recommendation H.323 or H.324.

Sicher disclosed such at least one the radio network terminating facilities includes means for implementing a wireless packet-oriented communication system according to ITU Recommendation H.323 or H.324 (*see col. 5 lines 49-55: H.323, H.324*).

At the time of the invention, **it would be obvious** to a person of ordinary skill in the art to combine such at least one the radio network terminating facilities includes means for implementing a wireless packet-oriented communication system according to ITU Recommendation H.323 or H.324, as taught by Sicher with Pequet, so that real-time multimedia communications can be operated through a packet-based network. **The motivation** for doing so would have been to provide voice over IP networks or videoconference via modems. Therefore,

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it would have been obvious to combine Sicher with Pequet in the invention as specified in the claim.

Examiner Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ken Vanderpuye** can be reached on **571-272-3078**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-3076**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by : *qulu*
Anthony T. Ton
Patent Examiner
November 02, 2004


PHIRIN SAM
PRIMARY EXAMINER